

**REMARKS**

Favorable reconsideration and allowance of this application are requested.

**I. Discussion of Claim Amendments**

By way of the amendment instructions above, independent claim 1 has been amended so as to recite the amount of component (ii) as 0.8 to 4 wt% as supported by page 5, line 16 of the originally filed specification.

Independent claim 1 has also been revised so as to include therein the substance of prior claim 6. As such, claim 6 has been canceled.

Following entry of this amendment, therefore, claims 1-5 and 7-12 remain pending herein for which favorable reconsideration and allowance are solicited.

**II. Response to 35 USC §102(b) Issues**

**A. Rejection Based on WO 01/02455**

Prior claims 1-12 attracted a rejection under 35 USC §§ 102(b) as allegedly anticipated by WO 01/02455. For ease of discussion, reference may be made to USP 6,559,225 to Irle et al as an English-language translation, it being understood that such reference likewise applies to its published International Counterpart WO 01/02455. As will become evident from the following discussion, Irle et al does not anticipate the present invention.

As was stated in the applicants' responsive Amendment dated December 20, 2006, the present invention is preferably embodied in **low gloss compositions** – i.e., compositions having a 60° gloss of  $\leq 40$  upon drying -- comprising a self-crosslinkable polyurethane.

Irle et al discloses polyurethane dispersions for use in lacquers and coating. The accompanying Supplemental Declaration of Richard Coogan evidences that the polyurethane dispersions of Irle et al are not "low gloss" compositions as defined by the presently pending claims.<sup>1</sup> Specifically, as noted therein polyurethane dispersions 1 to 4 in Examples 1 to 4 of Irle et al were replicated and the 60<sup>0</sup> gloss for each composition was measured. It was found in all examples that the compositions of Irle et al possessed 60<sup>0</sup> gloss which is essentially **double** the uppermost gloss limit required by the claims of the present application. Hence, the Irle et al compositions cannot be considered low gloss.

Therefore, Irle et al cannot anticipate the presently claimed invention. Therefore, withdrawal of the rejection advanced under 35 USC §102(b) based on Irle et al is in order.

#### **B. Rejection Based on WO 01/02455**

The incorporation of the subject matter of claim 6 into claim 1 by the amendment instructions above renders moot the Examiner's rejection of prior claims 1-5 and 7-12 under 35 USC §102(b) as allegedly anticipated by EP 332326. Withdrawal of the same is therefore in order.

### **III. Response to 35 USC §103(a) Issues**

#### **A. Rejection Based on WO 01/02455 to Irle et al**

Applicants suggest that the comments above in Section II.A are equally germane to the **unobviousness** of the claims pending herein over Irle et al. Specifically, one of

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<sup>1</sup> The accompanying Supplemental Declaration of Richard Coogan is substantively identical to the prior Declaration submitted with the Amendment dated December 20, 2006, except that the table therein has been clarified as to the polyurethane dispersions (1 to 4) tested and an erroneously missing column has been added to clarify what each of the values given in the table represent.

ordinary skill in this art would be given no guidance whatsoever by Irle et al to the **low gloss compositions** – i.e., compositions having a 60° gloss of  $\leq 40$  upon drying -- comprising a self-crosslinkable polyurethane as defined by the pending claims. Accordingly, the evidence provided by the accompanying Supplemental Declaration of Richard Coogan establishes the unobviousness of the present invention over Irle et al. Withdrawal of the rejection advanced under 35 USC §103(a) based on Irle et al is therefore in order.

**B. Rejection Based on USP 6,462,127 to Ingrisich et al**

Prior claims 1-12 attracted a rejection under 35 USC §103(a) as allegedly being obvious from Ingrisich et al. Applicants respectfully disagree.

Ingrisich et al is apparently cited by the Examiner as a disclosure of a self-crosslinking polyurethane. Significantly, no mention is made in Ingrisich et al of gloss. Applicant's note that it is difficult at best, if at all possible, to calculate the percentage of components of the polyurethane from the text as the percentages are for all ingredients and water. The applicants have therefore considered Ingrisich et al (as did the Examiner) in light of the therein disclosed examples.

There are at least two principal differences between the present invention as defined in claim 1 and Ingrisich et al, namely:

- i) Claim 1 pending herein requires **0.8 to 4 wt%** of at least one polyol containing ionic or potentially ionic water dispersing groups having a Mw in the range from 100 to 500 g/mol, and
- ii) that the polyol containing crosslinkable groups (component (iv)) has an average molecular weight in the range of from **150 to 6000 g/mol**, whereas no molecular weight is disclosed in at all in Ingrisich et al.

The examples of Ingrisich et al contain the following components (matched to the applicants' claim 1):

- (i) isophorone diisocyanate
- (ii) DMPA (always more than 6 wt%)
- (iii) (none)
- (iv) fatty acid modified polyol (no Mw is given)
- (v) polyester polyol Bester 42 H (no Mw is given but the text (column 6, line 35 suggests 500 to 4000 Dalton)
- (vi) 1,4-butanediol, which contrary to the Examiner's quote does **not** correspond to component A (iii).

Applicants have amended claim 1 so that the amount of DMPA is **not** "slightly" less than 6 wt%. Specifically, the upper limit of component (ii) in the applicants' claim 1 above has been clarified to be 4wt%. This amendment coupled with the examples in the originally filed specification demonstrate that having a higher level of (ii) (DMPA) has a concomitantly very large effect on the resulting gloss. As such, an ordinarily skilled person would **not** be guided to employing low levels of component (ii) and expect to achieve low gloss based on the disclosure of Ingrisich et al.

Thus, by the amendment to claim 1, it is now clear that there is much more than just a "slight" difference between the amounts of DMPA that may be employed to form the low gloss compositions of the applicants' invention and those disclosed by Ingrisich et al. Withdrawal of the rejection advanced against the claims under 35 USC §103(a) based on Ingrisich et al is therefore in order.

**C. Rejection Based on EP 332,326 and USP 4,839,443 to Akutsu et al**

Prior claim 5 has been separately rejected under 35 USC §103(a) based on EP '326 and Akutsu et al. In this regard, applicants note that claim 5 is dependent from claim 1 which, as noted above, is allowable over the applied reference advanced thereagainst. Thus, for these reasons claim 5 is similarly allowable over EP '326 and Akutsu et al.

Applicants note further that, while EP '326 discloses polyurethane coating compositions that are self-crosslinkable, there is no disclosure therein regarding the wt% of component (ii) (DMPA), or gloss requirements. The Examples however utilize approximately 5.5 wt% of DMPA which is substantially greater than the upper limit of 4 wt.% required by independent claim 1. And for the reasons noted above, one would not be guided to employing low levels of component (ii) and expect to achieve low gloss in light of the evidence provided by the examples in the originally filed specification. Thus, EP '326 does not provide any guidance to the ordinary person that a combination of components (i), (ii), (iv) and (v) would or could lead to a coating with a low gloss value.

There is also no particle size disclosure in EP '326. Thus, once again there is no guidance in EP '326 that a combination of a polyurethane made up of components as claimed and the larger particle size would provide compositions resulting in low gloss coatings.

The secondary reference to Akutsu et al fails to cure the deficiencies of EP '326 noted above. As such, withdrawal of the rejection advanced against claim 5 under 35 USC §103(a) based on EP '326 and Akutsu et al is in order.

**III. Conclusion**

Every effort has been made to advance prosecution of this application to allowance. Therefore, in view of the amendments and remarks above, applicant

**COOGAN et al**  
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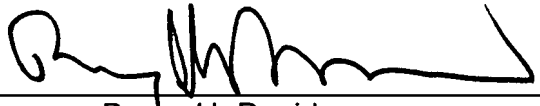
suggests that all claims are in condition for allowance and Official Notice of the same is solicited.

Should any small matters remain outstanding, the Examiner is encouraged to telephone the Applicants' undersigned attorney so that the same may be resolved without the need for an additional written action and reply.

An early and favorable reply on the merits is awaited.

Respectfully submitted,

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